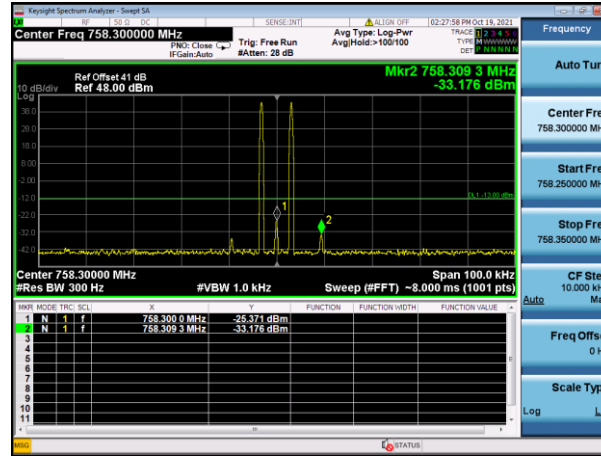


Appendix E - Noise/emission at Antenna Terminal

Test Data:

FDD LTE Band 14 _ Intermodulation product

Below test plots were only for recorded the case without engineering practice for reference.



Remark:

This EUT supports 2*2 MIMO, for MIMO mode the output signals are considered completely uncorrelated, so the antenna gain is 12.5dBi.

ERP = EIRP - 2.15dB

The conducted max intermodulation product is -33.176dBm/300Hz = -17.946dBm/10kHz, the conducted intermodulation product for 2x2 MIMO is -17.946 + 10*log(2) = -14.936 dBm/10kHz, ERP of intermodulation product is -14.936dBm/10kHz + 12.5dBi -2.15dB = -4.586dBm/10kHz

Applicant must use good engineering practice to make sure that the ERP of intermodulation products should not exceed the level -30dBm in 10kHz measurement bandwidth.



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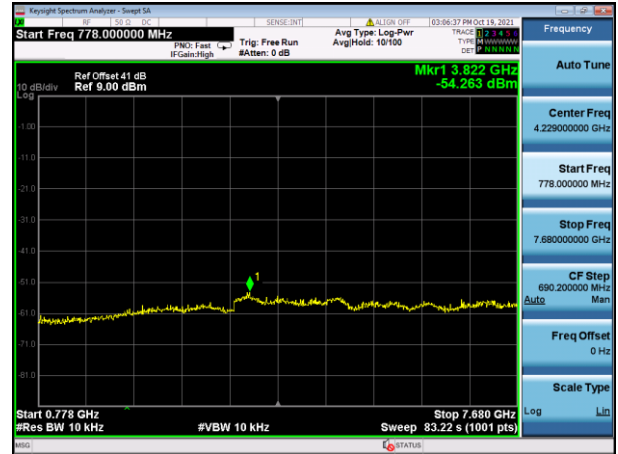
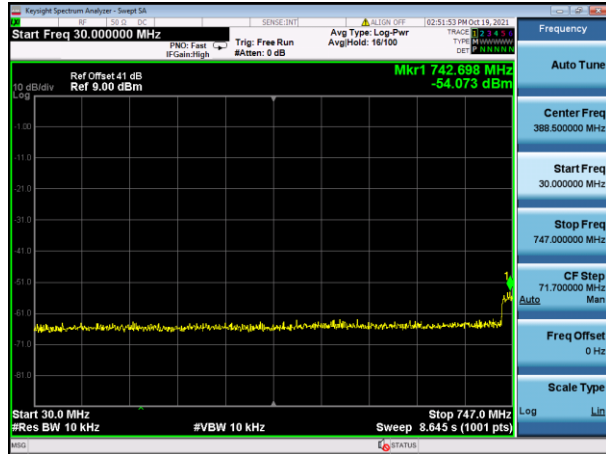
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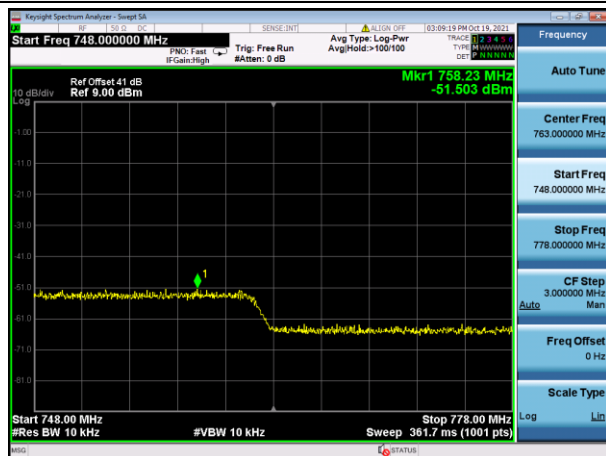
FDD LTE Band 14

Noise outside of the passband

Below test plots were only for recorded the case without engineering practice for reference.



Noise within of the passband



Remark:

This EUT supports 2*2 MIMO, for MIMO mode the output signals are considered completely uncorrelated, so the antenna gain is 12.5dBi.

$$ERP = EIRP - 2.15dB$$

The conducted max. noise on spectrum more than 1MHz outside of the passband is -54.073dBm/10Hz, the conducted max. noise on spectrum more than 1MHz outside of the passband for 2x2 MIMO is $-54.073 + 10 \cdot \log(2) = -51.063dBm/10kHz$, ERP of noise on spectrum more than 1MHz outside of the passband is $-51.063dBm/10kHz + 12.5dBi - 2.15dB = -40.713dBm/10kHz$.

The conducted max. noise on spectrum within the passband is -51.503dBm/10Hz, the conducted max. noise on spectrum within the passband for 2x2 MIMO is $-51.503 + 10 \cdot \log(2) = -48.493dBm/10kHz$, ERP of noise on spectrum within the passband is $-48.493dBm/10kHz + 12.5dBi - 2.15dB = -38.143dBm/10kHz$.

Applicant must use good engineering practice to make sure that the ERP of noise within of the passband should not exceed the level -43dBm in 10kHz measurement bandwidth and the ERP of noise on spectrum more than 1MHz outside of the passband should not exceed the level -70dBm in 10kHz measurement bandwidth.



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